AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111
Serial Number: 10/705,315
Filing Date: November 10, 2003
Title: DATA FLOW MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)
Assignee: Intel Corporation

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IN THE DRAWINGS

Corrected drawings are supplied herewith, each labeled as "REPLACEMENT SHEET".

FIG. 2 has been amended to include the designation "Fig. 2". No new matter has been added.

REMARKS

This communication responds to the Office Action mailed on August 15, 2005. Claims 1, 4, 11, 17-19, 22, 25, and 28 are amended, no claims are canceled, and no claims are added. As a result, claims 1-32 are now pending in this Application.

Objections to the Drawings

An objection has been raised to the use of the reference characters "100" for items having descriptive legends "SW1" and "SW2". It is respectfully noted that the "same reference character must never be used to designate different parts." *See* 37 C.F.R. § 1.84(p)(4). Thus, the reference character "100" has been used to designate identical parts. On the other hand, the descriptive legends "SW1" and "SW2" have been used to designate different instances of the same part. As noted by 37 C.F.R. § 1.84(o), "[s]uitable descriptive legends may be used …". Thus, the Applicant respectfully declines to amend FIG. 1 at this time.

An objection has been raised because FIG. 2 has not been labeled as such. The Applicant appreciates the Examiner's thorough review in this regard and a replacement sheet has been provided, incorporating the requested amendment.

Finally, an objection has been raised to FIG. 4 because "only that which is old is illustrated" and it does not include the legend "Prior Art." The Applicant respectfully disagrees. FIG. 4 illustrates an article of manufacture, claimed by the Applicant in claims 11-18. As such, the various embodiments illustrated in FIG. 4 are not prior art, and should not be designated as such. Therefore, the Applicant respectfully declines to amend FIG. 4 in the manner suggested.

Objection to the Specification

The Examiner objected to the title of the application as not being descriptive. The Applicant has amended the title to read "DATA FLOW MANAGEMENT APPARATUS, SYSTEMS, AND METHODS." It is believed this amendment addresses the concerns expressed in the Office Action, and the objection is therefore moot.

§102 Rejection of the Claims

Claims 1-6, 11-13, 17-23, 28 and 32 were rejected under 35 USC § 102(e) as being anticipated by Scifres et al. (U.S. 2003/0225905 A1; hereinafter "Scifres"). The Applicant does not admit that Scifres is prior art and reserves the right to swear behind this reference at a later date. In addition, because the Applicant asserts that the Office has not shown that Scifres discloses the identical invention as claimed, the Applicant traverses this rejection of the claims.

It is respectfully noted that anticipation under 35 USC § 102 requires the disclosure in a single prior art reference of each element of the claim under consideration. *See Verdegaal Bros. V. Union Oil Co. of California,* 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim." Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.,* 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.,* 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). "The *identical invention* must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.,* 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP § 2131 (emphasis added).

The Application states:

> The apparatus 100 may include an average determination module 138 to determine the determined average shared resource usage value 130, which may be found by determining a cumulative shared usage value 140 based on a selected number of ports 122 (e.g., three, as shown in FIG. 1) and dividing the cumulative shared usage 140 value by the selected number of ports 122. *The cumulative shared usage value 140 may be determined by summing the amount of the resource 134 used that is greater than a guaranteed minimum amount over the selected number of ports 122.* Application, Para. [0013] (emphasis added)

Thus, the average claimed by the Applicant may be determined by summing an amount of resource usage that is greater than a guaranteed minimum amount, and not as a simple average of resource usage, as taught by Scifres.

Since the resource is only shared when a guaranteed minimum amount of the resource has been used, claims 1, 11, 19, and 28 have been amended to make clear that the ports for which data flow is controlled are those that have an actual usage value above a predetermined average shared resource value associated with ports sharing the resource <u>after exceeding a guaranteed minimum amount of the resource</u>, and not for reasons related to patentability. Similarly, claim 25 has been amended to correct a typographical error and clarify that the determined average shared resource value is <u>greater than</u> the minimum (reserved) memory resource, and not for reasons related to patentability. Claims 4, 17, 18, and 22 have been amended so as to be consistent with the independent claims, and not for reasons related to patentability. No new matter has been added.

Therefore, since Scifres does not teach the elements claimed by the Applicant, it is believed that independent claims 1, 11, 19, 25, and 28 (as well as all claims depending from them) are in condition for allowance. Reconsideration and withdrawal of the rejection of claims 1-6, 11-13, 17-23, 28, and 32 under § 102 is respectfully requested.

§<u>103 Rejection of the Claims</u>

Claims 7-10, 14-16, 25-27, 30 and 31 were rejected under 35 USC § 103(a) as being unpatentable over Scifres in view of Ruutu et al. (U.S. 2003/0123392 A1; hereinafter "Ruutu"). Claim 24 was rejected under 35 USC § 103(a) as being unpatentable over Scifres in view of Liang (U.S. 5,933,427 A; hereinafter "Liang"). Claim 29 was rejected under 35 USC § 103(a) as being unpatentable over Scifres in view of Roberts et al. (U.S. 6,104,712 A; hereinafter "Roberts"). The Applicant does not admit that Ruutu, Liang, or Roberts are prior art, and reserves the right to swear behind these references in the future. And, since a *prima facie* case of obviousness has not been established as required by M.P.E.P. § 2142, the Applicant respectfully traverses this rejection.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988). The M.P.E.P. contains explicit direction to the Examiner in accordance with the *In re Fine* court:

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d (BNA) 1438 (Fed. Cir. 1991)).

The requirement of a suggestion or motivation to combine references in a *prima facie* case of obviousness is emphasized in the Federal Circuit opinion, *In re Sang Su Lee*, 277 F.3d 1338; 61 U.S.P.Q.2D 1430 (Fed. Cir. 2002), which indicates that the motivation must be supported by evidence in the record.

No proper *prima facie* case of obviousness has been established because the combination of references does not teach all of the limitations set forth in the claims. As mentioned previously, Scifres does not teach or suggest controlling data flow based on an average that is associated with a guaranteed minimum resource usage. Neither do Ruutu, Liang, or Roberts. In fact, Ruutu operates to shift free capacity as soon as a nominal capacity has been exceeded. This is simply the allocation of a resource from one channel to another as soon as the capacity of a first channel is exceeded, taking away capacity from the second channel. *See* Ruutu, Paras. [0016]-[0017]. Thus Ruutu, which uses an absolute capacity to regulate switching, teaches away from using an average capacity.

It is respectfully noted that the test for obviousness under § 103 must take into consideration the invention as a whole; that is, one must consider the particular problem solved by the combination of elements that define the invention. *See Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 U.S.P.Q. 543, 551 (Fed. Cir. 1985) (emphasis added). References must be considered in their entirety, including parts that teach away from the claims. See MPEP § 2141.02.

In summary, the references neither teach nor suggest the elements of "an actual usage value above a determined average shared resource usage value associated with the selected

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number of ports sharing a resource after exceeding a guaranteed minimum amount of the resource" or "an average determination module to determine a determined average shared resource usage value greater than the minimum memory resource", as claimed by the Applicant. In fact, Ruutu teaches away from the modifications suggested by the Office. Thus, the requirements of *M.P.E.P.* § 2142 have not been satisfied; and a *prima facie* case of obviousness has not been established with respect to the Applicant's claims. It is therefore respectfully requested that the rejection of claims 7-10, 14-16, 24-27, and 29-31 under 35 U.S.C. § 103 be reconsidered and withdrawn.

CONCLUSION

The Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone the Applicant's attorney, Mark Muller at (210) 308-5677, or the undersigned attorney at (612) 349-9592, to facilitate prosecution of this Application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this ___ day of October 2005.

John V. Gustfur-Wrathall

Name   Signature